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### **lob Overview**

Sailors and Marine Oilers are among the water transportation workers operating watercraft to move large cargo shipments and passengers on both domestic waterways and on the deep sea. They are also known as Ordinary Seamen, Able Seamen (Deckhands on inland waters), and as Merchant Marines on commercial ships. Sailors and Marine Oilers play a vital role in the United States economy by moving raw materials, grains, oil, and manufactured goods to national and international ports. They operate and maintain deep-sea ships, tugboats, towboats, ferries, dredges, and excursion vessels on the oceans, rivers, canals, and in harbors.

Water transportation employees may work in one of three departments: the deck, engine, or steward department. Sailors, both Ordinary Seamen and Able Seamen, work in the deck department. Oilers are members of the engine department. The steward department cooks meals and takes care of the living quarters.

#### Sailors

Sailors operate the vessel and its deck equipment under the direction of the ship's officers and keep the non-engineering areas in good condition. They stand watch, looking out for other vessels and obstructions in the ship's path. Sailors also steer the ship, measure water depth in shallow water, and maintain and operate deck equipment such as lifeboats, anchors, and cargo-handling gear. Entry-level Sailors are known as Ordinary Seamen. Experienced Sailors are designated as Able Seamen on ocean-going vessels, but may be called Deckhands on inland waters.

#### **Marine Oilers**

Marine Oilers maintain the vessel in proper running order in the engine spaces below the decks. These workers lubricate gears, shafts, bearings, and other moving parts of engines and motors. They read pressure and temperature gauges, record data in engineering logs, assist with repairs, and adjust machinery. Marine Oilers are at the entry-level position of the qualified members of the engine department or QMEDs.

## Typical Tasks

#### **Able Seamen**

- ► Measure depth of water in shallow or unfamiliar waters, using leadline, and telephones or shout information to bridge.
- Break out, rig, overhaul, and stow cargo-handling gear, stationary rigging, and running gear.

- Steer ship under direction of ship's commander or navigating officer, or direct helmsman to steer, following designated course.
- Overhaul lifeboats and lifeboat gear, and lower or raise lifeboats with winch or falls.
- Stand by wheel when ship is on automatic pilot and verify accuracy of course by comparing with magnetic compass.
- Maintain ship's log while in port, and stand gangway watch to prevent unauthorized persons from boarding ship.
- Relay specified signals to ships in vicinity, using visual signaling devices, such as blinkerlight and semaphore.

#### **Ordinary Seamen and Marine Oilers**

- Clean and polish wood trim, brass, and other metal parts.
- Paint or varnish decks, superstructures, lifeboats, or sides of ship.
- Stand watch from bow of ship or wing of bridge to look for obstructions in path of ship.
- Record data in ship's log such as weather conditions and distance traveled.
- Turn wheel while observing compass to maintain ship on course.
- Lubricate machinery, equipment, and engine parts, such as gears, shafts, and bearings.
- Examine machinery for specified pressure and flow of lubricants.
- Assist engineer in overhauling and adjusting machinery.

Detailed descriptions of these occupations may be found in the Occupational Information Network (O\*NET) at online.onetcenter.org.

## Important Skills, Knowledge, and Abilities

#### Able Seamen

- Equipment Selection Determining the kind of tools and equipment needed to do a job.
- Monitoring Monitoring/assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
- Operation Monitoring Watching gauges, dials, or other indicators to make sure a machine is working properly.
- Equipment Maintenance Performing routine maintenance on equipment and determining when and what kind of maintenance is needed.
- Transportation Knowledge of principles and methods for moving people or goods by air, rail, sea, or road, including the relative costs and benefits.
- Mechanical Knowledge of machines and tools, including their designs, uses, repair, and maintenance.
- Geography Knowledge of principles and methods for describing the features of land, sea, and air masses, including their physical characteristics, locations, interrelationships, and distribution of plant, animal, and human life.
- Far Vision The ability to see details at a distance.
- Oral Expression The ability to communicate information and ideas in speaking so others will understand.

- Spatial Orientation The ability to know your location in relation to the environment or to know where other objects are in relation to you.
- Selective Attention The ability to concentrate on a task over a period of time without being distracted.
- Arm-Hand Steadiness The ability to keep your hand and arm steady while moving your arm or while holding your arm and hand in one position.

#### **Ordinary Seamen and Marine Oilers**

- Equipment Maintenance Performing routine maintenance on equipment and determining when and what kind of maintenance is needed.
- Repairing Repairing machines or systems using the needed tools.
- Equipment Selection Determining the kind of tools and equipment needed to do a job.
- Operation and Control Controlling operations of equipment or systems.
- Coordination Adjusting actions in relation to others' actions.
- Far Vision The ability to see details at a distance.
- Manual Dexterity The ability to quickly move your hand, your hand together with your arm, or your two hands to grasp, manipulate, or assemble objects.
- Spatial Orientation The ability to know your location in relation to the environment or to know where other objects are in relation to you.
- Glare Sensitivity The ability to see objects in the presence of glare or bright lighting.
- Near Vision The ability to see details at close range (within a few feet of the observer).
- Wrist-Finger Speed The ability to make fast, simple, repeated movements of the fingers, hands, and wrists.
- Extent Flexibility The ability to bend, stretch, twist, or reach with your body, arms, and/or legs.

#### Work Environment

Sailors and Marine Oilers regularly work in damp and cold conditions. They risk injury or death from falling overboard and hazards associated with working with machinery, heavy loads, and dangerous cargo. However, modern safety procedures and advanced emergency communications have improved the safety of water transportation occupations.

People working in water transportation occupations may spend extended periods of time at sea. When at sea, Sailors and Marine Oilers work seven days a week. They usually stand watch for 4 hours and are off for 8 hours. Working overtime hours is commonplace. Workers on rivers, canals, or harbors are more likely to work year-round. Some work 8 or 12 hour shifts and go home every day. Others work steadily for a week or a month and then have an extended period off. They usually are on duty for 6 or 12 hours and off for 6 or 12 hours.

Many water transportation workers belong to one of the following unions: International Longshore and Warehouse Union, International Organization of Masters, Mates, and Pilots, or the Seafarers' International Union.

### California's Job Outlook and Wages

The California Outlook and Wage table below represents the occupation across all industries.

Standard Occupational Classification	Estimated Number of Workers 2004	Estimated Number of Workers 2014	Average Annual Openings	2006 Wage Range (per hour)
Sailors and Marine C	Dilers			
53-5011	2,800	3,200	140	\$11.18 to \$21.71
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Wages do not reflect self-employment.

Average annual openings include new jobs plus net replacements.

Source: www.labormarketinfo.edd.ca.gov, Employment Projections by Occupation and OES Employment & Wages by Occupation, Labor Market Information Division, Employment Development Department.

#### **Trends**

Employment of Sailors and Marine Oilers is expected to grow at a slower than average rate from 2004 to 2014. Job openings will result primarily from the need to replace workers who transfer to other occupations or who retire or leave the labor force for other reasons.

Employment in deep-sea shipping is expected to stabilize in future years. Implementation of international regulations has standardized and raised shipping standards concerning safety, training, and working conditions. This has made the costs of operating U.S. ships more competitive when compared to foreign-flagged ships.

Also, employment growth is expected in passenger cruise ships within U.S. waters. Ships that operate between U.S. ports are required by law to be U.S. flagged vessels.

# Training/Requirements/Apprenticeships

Sailors and Marine Oilers must meet the following basic requirements to obtain employment:

- Minimum age of 16 years. (Applicants under age 18 must provide notarized parental consent.)
- High School diploma or equivalent, preferred.
- Valid U.S. Merchant Mariner's Document (MMD).
- Moderate-to-heavy lifting required.
- Drug test screening and fingerprint background check.

Entry, training, and educational requirements for most water transportation occupations are established and regulated by the U.S. Coast Guard, which offers various kinds of licenses depending on the occupation and type of vessel. Water transportation workers employed on U.S. vessels weighing greater that 100 gross register tons are required to have a valid U.S. MMD.

Able Seamen and Oilers must hold a U.S. Coast Guard-issued document. All qualified ratings for the Able Seaman or QMED require the successful completion of a written exam. Employment with the Merchant Marines as an unlicensed Seaman requires an MMD.

For further information on certification and licensing requirements, access the U.S. Coast Guard Web site at <u>www.uscg.mil</u>.

#### **Recommended High School Course Work**

High school general education courses in language arts, business mathematics, machine shop, and computer technology are helpful.

Students who are interested in water transportation occupations might consider participating in a local Sea Scouts troop. This organization teaches high school boys and girls (ages 14-20) basic sailing and shipboard tasks on working ships throughout California, including inland ports on rivers and lakes. It is administered by the Boy Scouts of America.

## Where Do I Find the Job?

Direct application to employers remains one of the most effective job search methods. After obtaining a valid U.S. Merchant Mariner's Document (MMD) from the U.S. Coast Guard, contact a marine company or a maritime labor union to find work.

Use the Search for Employers by Industry feature on the Career Center page at www.labormarketinfo.edd.ca.gov to locate employers in your area. Search under the following industry names to get a list of private firms and their addresses:

- Coastal/Great Lakes Freight Transport
- Deep Sea Freight Transportation
- ➡ Inland Water Freight Transportation
- Inland Water Passenger Transportation
- Other Support Activity, Water Transport
- Scenic/Sightseeing Transportation, Water

Search these **yellow page** headings for listings of private firms:

- Boat Repairing
- Engines Rebuilding & Exchanging
- Marinas

- Marine Contractors
- Recruiting-Armed Forces
- Ships & Ship Operation

Employment opportunities for Sailors and Marine Oilers are also available with the U.S. Coast Guard and U.S. Navy. Refer to Other Sources.

## Where Can the Job Lead?

Opportunities for advancement are somewhat limited. Entry-level workers are classified as Ordinary Seamen. They may work in any of the three unlicensed departments: deck, engine, or steward. With three years experience and training, an Ordinary Seaman can take the Able Seaman exam and move up.

Special training is not required to become a Seaman on vessels operating in harbors or on rivers. After gaining sufficient experience and knowledge, Seamen may take a U.S. Coast Guard exam to qualify as a mate, pilot, or captain.

#### **Related Occupations**

Bridge and Lock Tenders

Industrial Truck and Tractor Operators, Forklift Operators (see Logistics Profile)

Mates - Ship, Boat, and Barge

Motorboat Operators

Truck Drivers, Light (see Logistics Profile)

Well and Core Drill Operators

#### Other Sources

California Association of Regional Occupational Centers and Programs www.carocp.org

International Longshore and Warehouse Union www.ilwu.org

International Organization of Masters, Mates, and Pilots, Pacific Maritime Region www.mmp-pmr.org

Material Handling Industry of America www.mhia.org

Pacific Maritime Association www.pmanet.org

Seafarers' International Union www.seafarers.org

U.S. Coast Guard www.uscg.mil

U.S. Maritime Administration www.marad.dot.gov

U.S. Navy www.navy.com